U.S. Renewable Natural Gas Opportunity

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Johannes D. Escudero
CEO & Executive Director
Coalition for Renewable Natural Gas
Presentation Overview

- RNG By The Numbers
- Industry Trajectory
- Policy
Renewable **Natural Gas** can & should be part of the United State’s **solution** to...

- Cut Smog & Air Pollution
- Combat Climate Change
- Stabilize Fuel Price Volatility
- Reduce Dependence on Foreign Oil
- Curve Unsustainable Waste Practices
Renewable Natural Gas is...

- Clean
- Domestic
- Abundant
- Affordable
- Sustainable
RNG provides an ultra-clean, very-low carbon fuel to a new generation of medium and heavy duty NGVs
USING 100% RNG in vehicles can reduce GHG emissions by more than 80%.

USING 20% RNG-blend provides a GHG reduction between 26% and 30%.

RNG from some sources are carbon negative, meaning that they sequester GHG during the fuel lifecycle.
Natural gas provides:

90% Lower NOx emissions with new “near-zero” engine

99% SOx reduction compared to diesel
RNG helps create **fuel security** by diversifying America’s fuel supply and reducing dependence on foreign oil.
RNG projects operate or are under construction in **24 States**
RNG + NGVs provide consumers with vehicles and fuel options increasing competition and driving down prices at the pump
OVER 20% OF TRANSIT BUSES OPERATE ON NG

OVER 60% OF NEW REFUSE TRUCK ORDERS ARE NG

THE HEAVY-DUTY TRUCK MARKET CONTINUES TO TRANSITION TO NG
RNG promotes **sustainability** and helps ensure waste isn’t wasted
U.S. RETAILER AND CONSUMERS DISCARD 133 BILLION POUNDS OF FOOD ANNUALLY

THE U.S. WASTES 30-40% OF ITS FOOD
RNG PROJECTS CAPTURE THE GHG FROM FOOD AND OTHER ORGANIC WASTE THAT WOULD OTHERWISE ESCAPE INTO THE EARTH’S ATMOSPHERE.
POTENTIAL SOURCES OF ORGANICS USED TO PRODUCE RNG INCLUDE:

- **FOOD WASTE**: 66.5 MILLION TONS / YEAR
- **WASTEWATER**: 17,000 FACILITIES
- **AGRICULTURE WASTE**: 8,000 LARGE FARMS AND DAIRIES
- **LANDFILL GAS**: 1,750 LANDFILLS
The U.S. Renewable Natural Gas Industry is Gaining Momentum
RNG PRODUCTION FOR TRANSPORTATION FUEL

GREW BY 5X BETWEEN 2013 AND 2015

25.9 M EGE VS 139.8 M EGE

IS ON PACE TO TRIPLE IN VOLUME BY 2018

481.5 M EGE PROJECTED
40 PROJECTS in North America produce ULTRA-LOW CARBON RNG for transportation fuel use; and the number of projects is on track to double to 80 by the end of 2018.
OF NATURAL GAS USED IN TRANSPORTATION TODAY IS **RNG**

**50% OF ALL**

**NATURAL GAS**

**VEHICLE FUEL IN CALIFORNIA**

**RNG** **IN 2015**
Why is this happening?

- Superior Environmental Attributes
- Industry Leadership & Organization
- Increased Awareness
- Policy Responsiveness
Thank you!

Johannes D. Escudero
CEO & Executive Director
Coalition for Renewable Natural Gas

(o) 916.588.3033
(c) 916.520.4764

Johannes@RNGCoalition.com
RNGCoalition.com

@CoalitionForRNG